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Effectiveness of Cognitive Behavioral Therapy Versus Counselling on Academic Performance among Late Adolescence in Selected Arts College

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Abstract **Background:** Cognitive Behavioral Therapy (CBT) and counseling have emerged as significant interventions in enhancing academic performance among late adolescents. The aim of the present study to determine the effectiveness of cognitive behavioural therapy verses counselling on academic performance among late adolescence. **Methods:** The study was conducted over a period of one year, from June 2023 to June 2024. Ethical approval for the study was obtained from the SMCH Institutional Ethics Committee (Approval Number: 003/08/2022/IEC/SMCH). Out of 900 students who met the inclusion criteria, 330 were selected through a simple random sampling technique. Experimental Group I consisted of 110 students and Experimental Group II consisted of 110 students and the Control Group included 110 students. **Result:** The study results showed that following the intervention, both Experimental Group I and II showed significant improvement in academic performance ($p<0.001$), with Experimental Group I achieving higher post-test scores (27.28±0.337) than Experimental Group II (26.21±0.381). The interventions were effective, with Experimental Group I and Experimental Group II demonstrating comparatively better results than the control group. **Conclusion:** The study found cognitive behavioral therapy showed slightly more effective results than counseling for enhancing academic success. The study highlights the potential of cognitive behavioral therapy to more effectively enhance academic performance compared to counseling.

Key Words Academic Performance, Cognitive Behavioral Therapy, Counselling

INTRODUCTION

Cognitive Behavioral Therapy (CBT) and counseling have emerged as significant interventions in enhancing academic performance among late adolescents. Research indicates that CBT, with its structured approach to modifying negative thought patterns and behaviors, may be particularly effective in addressing academic stress and anxiety that often impede student performance [1,2].

Academic stress significantly impacts students' educational experiences, particularly in late adolescence, as it creates a challenging learning environment that often hinders academic performance. Research indicates that academic stress arises from various factors, including demands of coursework, parental expectations and social pressures, which can lead to heightened levels of anxiety and depression among students. Studies highlight that CBT enables students to develop better coping strategies, enhancing their psychological resilience and ability to manage stress effectively [3,4].

In addition to CBT, traditional counseling approaches serve as a complementary technique that promotes academic improvement. Counseling provides a supportive environment for students to explore personal issues affecting their academic performance, such as family dynamics or social relationships [5,6]. The relationship between improved mental health outcomes and academic success is well documented, suggesting that effective counseling can lead to better time management, enhanced study habits and improved focus in studies [7,8]. This indicates that counseling can play a vital role in fostering emotional and psychological well-being, thereby indirectly enhancing academic outcomes.

When considering the comparative effectiveness of CBT versus counseling specifically, studies suggest that while both approaches provide significant benefits, CBT may offer more rapid and measurable improvements in academic performance due to its focus on specific cognitive processes and actions [9].

In conclusion, both cognitive behavioral therapy and counseling hold merit in promoting academic success among late adolescents. However, CBT appears to have a particular edge due to its focused intervention strategies that directly address the cognitive and behavioral patterns impacting academic performance. Therefore, incorporating CBT into educational support systems may be particularly beneficial for enhancing academic outcomes among this age group.

Aim of the study

The study aimed to determine the effectiveness of cognitive behavioral therapy verses counselling on academic performance among late adolescence.

METHODS

Participants

The study was conducted over a period of one year, from June 2023 to June 2024. Ethical approval for the study was obtained from the SMCH Institutional Ethics Committee (Approval Number: 003/08/2022/IEC/SMCH). Out of 900 students who met the inclusion criteria, 330 were selected through a simple random sampling technique. Experimental Group I consisted of 110 students and Experimental Group II consisted of 110 students and the Control Group included 110 students. Written informed consent was obtained from all participating students and their parents. Academic performance rating scale was used to asses academic performance among the students.

Sample Size Calculation

Based on power analysis, the required sample size was determined to be 110 per group. Students were selected according to the inclusion criteria, resulting in 110 students in Experimental Group I, 110 students in Experimental Group II and 110 students in the Control Group.

Inclusion and Exclusion Criteria

The inclusion criteria for this study consisted of first-year college students aged between 17 to 18 years. The exclusion criteria excluded students who were unable to communicate in English or Tamil.

Data Collection Procedure

A pre-test and post- test were conducted for Experimental Group I, Experimental Group II and the Control Group. Students from selected colleges were assessed using the Academic Performance Rating Scale. The investigators chose first-year students to collect data from the chosen institutions. Experimental Group I (110 students) received Cognitive Behavioral Therapy (CBT) once a week for eight weeks. The CBT-IA model, implemented for this group, is a comprehensive approach divided into three stages: Behavior modification, cognitive restructuring and Harm Reduction Therapy (HRT). Experimental Group II (110 students) received counseling once a week for eight weeks, with each session structured into five stages: relationship building, assessment, goal setting, intervention and termination. After eight weeks of intervention, a post-test was administered to all groups. The Control Group (110 students) did not receive any intervention during the study period.

Statistical Analysis

The data were expressed as Mean±SE. Means were compared using Two-way analysis of variance (ANOVA) to evaluate group differences, test differences and their interactions. When significant differences were identified, the Bonferroni 't' test was employed for multiple comparisons both between and within groups. A probability value of 0.05 or less was considered statistically significant. Statistical analyses were conducted using SigmaPlot version 14.5.

RESULTS

Academic Performance

In the pre-test**,** the Control Group had 35.5% of adolescents performing at a Good level, 54.4% at a Moderate level and 9.1% at a Poor level. In Experimental Group I, only 19.1% achieved Good performance, while 59.1% were Moderate and 21.8% were Poor. Experimental Group II recorded 10% Good performers, 76.4% Moderate and 13.6% Poor. Overall, most participants across all groups fell under the Moderate category, with a noticeable number in the Poor category, especially in the experimental groups (Table 1).

Following the intervention, the post-test showed improvement across all groups. In the Control Group, Good performers rose slightly to 40.9%, Moderate performers accounted for 59.1% and no participants remained Poor. Experimental Group I showed a major shift with 84.5% achieving Good performance and 15.5% Moderate, eliminating Poor performance entirely. Similarly, Experimental Group II saw 71.8% in the Good category and 28.2% in Moderate, with no Poor performers. The results indicate a strong positive impact of the interventions in the experimental groups (Table 1).

Comparison of Academic Performance

The analysis indicated a statistically significant improvement in academic performance among late adolescents in both Experimental Group I and Experimental Group II from pre-test to post-test ($p<0.001$), while the control group exhibited no significant change over the same period ($p = 0.996$).

Post-test comparisons revealed that the mean score of Experimental Group I (27.28±0.337) was higher than that of Experimental Group II (26.21±0.381), indicating a greater enhancement in academic performance among participants in Experimental Group I (Table 2).

Table 1: Percentage Wise Distribution on Level of Academic Performance among Late Adolescence in Pre-test and Post-test

Level of academic performance	Pre-test (n, %)	Post-test I (n, %)
Control Group		
Good	39 (35.5%)	45 (40.9%)
Moderate	61 (54.4%)	65 (59.1%)
Poor	10 (9.1%)	0 (0%)
Experimental Group I		
Good	21 (19.1%)	93 (84.5%)
Moderate	65 (59.1%)	17 (15.5%)
Poor	24 (21.8%)	0 (0%)
Experimental Group II		
Good	11 (10%)	79 (71.8%)
Moderate	84 (76.4%)	31 (28.2%)
Poor	15 (13.6%)	0 (0%)

Table 2: Comparison of Academic Performance Among Control, Experimental Group I and Experimental Group II (Pre-test vs. Post-test)

S. No.	Group Comparisons	Statistics (Mean±SE)
1.	Control-Pre-test	23.16±0.398
2.	Control-Post-test	23.72±0.415
3.	Experimental Group I-Pre-test	20.18±0.514
4.	Experimental Group I-Post-test	27.28±0.337
5.	Experimental Group II-Pre-test	20.24±0.445
6.	Experimental Group II-Post-test	26.21±0.381
	Test Comparisons	(t/p-value)
1.	Pre-test: Control vs. Experimental Group I	t = 5.219, p<0.001
2.	Post-test: Control vs. Experimental Group I	t = 6.238, p<0.001
3.	Within Experimental Group I (Pre vs. Post-test)	t = 12.428, p<0.001
4.	Within Control Group (Pre vs. Post-test)	t = 0.971, p = 0.996
5.	Pre-test: Control vs. Experimental Group II	t = 5.112, p<0.001
6.	Post-test: Control vs. Experimental Group II	t = 4.350, p<0.001
7.	Within Experimental Group II (Pre vs. Post-test)	t = 10.431, p<0.001

Furthermore, both experimental groups demonstrated significantly superior outcomes compared to the control group ($p<0.001$), thereby affirming the effectiveness of the intervention strategies, with Experimental Group I exhibiting comparatively better results.

DISCUSSION

The improvements in academic performance among late adolescents after the interventions show that targeted therapies like Cognitive Behavioral Therapy (CBT) and counseling are effective. The data reveal that "Good" performance increased to 84.5% in Experimental Group I and 71.8% in Experimental Group II, compared to only 40.9% in the Control Group. Statistical tests confirmed significant improvements ($p<0.001$) in both experimental groups, with Experimental Group I achieving a higher post-test average (27.28±0.337) than Experimental Group II (26.21±0.381), suggesting that CBT may be more effective [10].

Research supports CBT as especially helpful for adolescents struggling with academics because it helps change negative thinking patterns [11]. The elimination of "Poor" performance across all groups is encouraging, showing that both counseling and CBT can help students improve how they approach and manage their studies [12].

The findings also show that CBT, being more structured, might produce faster and stronger academic improvements than general counseling. Studies suggest CBT helps students deal with negative thoughts and builds their confidence, leading to better academic results [13]. This explains why Experimental Group I, which used CBT, performed better.

However, the results also highlight that not all students respond in the same way. Future research should explore how different therapeutic methods can be tailored to fit the needs of different students [14]. Personalized counseling approaches could maximize academic success by matching interventions to students' individual needs [15].

CONCLUSIONS

The study finding showed the significant improvements confirm that structured therapeutic methods like CBT can play an important role in boosting academic performance among adolescents. This emphasizes the need to use evidence-based psychological practices in schools to better support students' academic and emotional growth.

Limitations

A limitation of this study is its focus on first-year students, limiting generalizability to other age groups or education levels. The reliance on self-reported academic performance may introduce bias and the sample was restricted to students who could communicate in English or Tamil. External factors affecting academic performance were not considered and future research could address these aspects.

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Conflicts of Interest

The authors declare that there are no conflicts of interest.

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